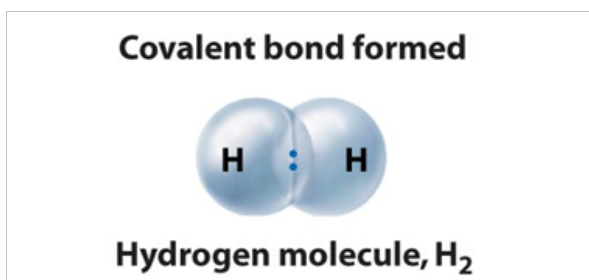


## Molecular Compounds

- Formed when nonmetal combine with other nonmetal
- Atoms held together by covalent bond.
- Shared **electrons**



## Common Molecular Compounds\*

H<sub>2</sub>O- water

CH<sub>4</sub> - methane aka natural

H<sub>2</sub>O<sub>2</sub>- hydrogen peroxide gas

NH<sub>3</sub> - ammonia

C<sub>3</sub>H<sub>8</sub>- propane

nm + nm

## Naming

- Name LEFT-MOST element'
- Name other non-metal
  - \* End in 'ide'
- Add prefixes:

Prefix	Number of Atoms
Mono-	1
Di-	2
Tri-	3
Tetra-	4
penta-	5

Example:  $P_2O_5$

$CO_2$  - carbon dioxide  
diphosphorus pentoxide

## Special Rule

- Name CO  $CO$  carbon monoxide
- Call this
- Carbon monoxide NOT monocarbon monoxide
- If the first element of the molecular compound has only ONE ATOM – DO NOT include *mono*

$CO_2$  carbon dioxide

## Roman Numerals

- Gold(III) phosphide

*When do I use Roman Numerals?*

- **ONLY** when naming transition metals

- To represent **ionic charge**  
NOT the number of atoms

The roman numeral is the  
CHARGE